

In the Claims

Claim 1. (Currently amended) A composite absorbent structure, comprising:

a. a first wicking layer comprising wettable cellulosic lamellae wherein the first wicking layer exhibits a vertical liquid flux rate value at a height of about 15 centimeters of at least about 0.08 grams of liquid per minute per gram of absorbent structure per meter length of the first wicking layer;

b. a second retention layer comprising a hydrogel-forming polymeric material; and

c. a bonding agent that bonds said first wicking layer to said second retention layer ~~for bonding said first wicking layer and said second retention layer~~ to form a composite absorbent structure capable of liquid transport and liquid retention functions at a length of at least about 15 centimeters, a saturated capacity of at least about 5 grams of liquid per gram of composite absorbent structure, and an Absorbent Capacity at 15 cm of at least about 5 grams of liquid per gram of second retention layer.

Claim 2. (Previously presented) The composite absorbent structure of Claim 1, wherein said first wicking layer exhibits a vertical liquid flux rate at a height of about 5 centimeters of at least about 0.4 grams of liquid per minute, said first wicking layer exhibits a wicking time of less than about 3.5 minutes, and said first wicking layer, has a basis weight greater than 100 grams per square meter and less than 300 grams per square meter.

Claim 3. (Original) The absorbent structure of Claim 1, wherein said bonding agent comprises polyhydroxyalkanoate.

Claim 4. (Withdrawn) The absorbent structure of Claim 1, wherein said bonding agent comprises poly(lactic)acid.

Claim 5. (Original) The absorbent structure of Claim 1, wherein said hydrogel-forming polymeric material comprises a superabsorbent.

Claim 6. (Original) The absorbent structure of Claim 1, wherein said first wicking layer exhibits a vertical liquid flux rate value at a height of about 15

centimeters of at least about 0.1 grams of liquid per minute per gram of first wicking layer per meter length of cross-sectional width of said first wicking layer.

Claim 7. (Original) The absorbent structure of Claim 1, wherein said first wicking layer exhibits a vertical liquid flux rate value at a height of about 15 centimeters of at least about 0.1 grams of liquid per minute per gram of first wicking layer per meter length of cross-sectional width of said first wicking layer.

Claim 8. (Original) The absorbent structure of Claim 1, wherein said first wicking layer exhibits a vertical liquid flux rate value at a height of about 5 centimeters of at least about 0.4 grams of liquid per minute per gram of first wicking layer per meter length of cross-sectional width of said first wicking layer.

Claim 9. (Original) The absorbent structure of Claim 1, wherein said first wicking layer exhibits a vertical liquid flux rate value at a height of about 5 centimeters of at least about 0.6 grams of liquid per minute per gram of first wicking layer per meter length of cross-sectional width of said first wicking layer.

Claim 10. (Canceled)

Claim 11. (Canceled)

Claim 12. (Canceled)

Claim 13. (Canceled)

Claim 14. (Canceled)

Claim 15. (Canceled)

Claim 16. (Canceled)

Claim 17. (Canceled)

Claim 18. (Canceled)

Claim 19. (Currently amended) A method of forming a composite absorbent structure, comprising:

a. providing a first wicking layer of wettable cellulosic lamellae wherein the first wicking layer exhibits a vertical liquid flux rate value at a height of about 15 centimeters of at least about 0.08 grams of liquid per minute per gram of absorbent structure per meter length of the first wicking layer;

b. providing a second retention layer of a hydrogel-forming polymeric superabsorbent material;

c. providing a bonding agent that bonds said first wicking layer to said second retention layer ~~for bonding said first wicking layer and said second retention layer~~; and

d. combining said first wicking layer, said second retention layer, and said bonding agent to form a composite absorbent structure having a minimum contact intimacy ratio for providing a liquid transport function and a liquid retention function such that the first wicking layer and the second retention layer are that the first wicking layer and the second retention layer are combined together in a manner to obtain a contact to achieve liquid transport and liquid retention functions at a length of at least about 15 centimeters, a saturated capacity of at least about 5 grams of liquid per gram of composite absorbent structure, and an Absorbent Capacity at 15 cm of at least about 5 grams of liquid per gram of second retention layer.

Claim 20. (Previously presented) The method of forming a composite absorbent structure as set forth in Claim 19, wherein said first wicking layer exhibits a vertical liquid flux rate at a height of about 5 centimeters of at least about 0.4 grams of liquid per minute, said first wicking layer exhibits a wicking time of less than about 3.5 minutes, and said first wicking layer, has a basis weight greater than 100 grams per square meter and less than 300 grams per square meter.

Claim 21. (Previously presented) The method of forming a composite absorbent structure as set forth in Claim 19, wherein said bonding agent comprises polyhydroxyalkanoate.

Claim 22. (Withdrawn) The method of forming a composite absorbent structure as set forth in Claim 19, wherein said bonding agent comprises poly(lactic)acid.

Claim 23. (Previously presented) A disposable absorbent product comprising a liquid-permeable top sheet, a back sheet attached to said top sheet, and an absorbent structure positioned between said top sheet and said back sheet, said absorbent structure having a first wicking layer of wettable cellulosic lamellae exhibiting a vertical liquid flux rate value at a height of about 15 centimeters of at least about 0.08 grams of liquid per minute per gram of absorbent structure per meter length of said first wicking layer, a second retention layer of a hydrogel-forming polymeric superabsorbent material, and a bonding agent that bonds said first wicking

~~layer to said second retention layer for bonding said first wicking layer and said second retention layer~~ to form a composite absorbent structure having a minimum contact intimacy ratio for providing a liquid transport function and a liquid retention function such that said first wicking layer and said second retention layer are combined together in a manner to obtain a contact to achieve liquid transport and liquid retention functions at a length of at least about 15 centimeters, a saturated capacity of at least about 5 grams of liquid per gram of composite absorbent structure, and an Absorbent Capacity at 15 cm of at least about 5 grams of liquid per gram of second retention layer.

Claim 24. (Previously presented) The composite absorbent structure of Claim 23, wherein said first wicking layer exhibits a vertical liquid flux rate at a height of about 5 centimeters of at least about 0.4 grams of liquid per minute, said first wicking layer exhibits a wicking time of less than about 3.5 minutes, and said first wicking layer, has a basis weight greater than 100 grams per square meter and less than 300 grams per square meter.

Claim 25. (Original) The absorbent structure of Claim 24, wherein said bonding agent comprises polyhydroxyalkanoate.

Claim 26. (Withdrawn) The absorbent structure of Claim 24, wherein said bonding agent comprises poly(lactic)acid.